ABSTRACT OF THE DISCLOSURE

In accordance with the present invention, a portion of a packetized data stream is copied from a data network without interfering with the flow of the data in the network. A known test signal is then substituted for the information contained in each copied packet to prepare a pseudo-media packet stream. The known test signal is encoded and packetized using the same methods used for the copied data stream. The pseudo-media signal is then recovered from the pseudo-media stream using the same depacketizing and decoding methods to be used on the copied packetized data stream. The recovered signal is an accurate representation of the state of the media stream since it has gone through the same packetization/depacketization and encoding/decoding procedures and includes all of the same faults of the copied data stream. The subjective quality of the recovered signal is then measured providing an accurate measure of the subjective quality of the copied media stream.